UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/488,091	01/18/2000	Kevin R. Lilland	P31.12-0009	3933

27367 7590 09/02/2005	EXAMINER	
WESTMAN CHAMPLIN & KELLY, P.A.	PARK, CHAN S	
SUITE 1600 - INTERNATIONAL CENTRE	ART UNIT	PAPER NUMBER
900 SECOND AVENUE SOUTH	2622	
MINNEAPOLIS, MN 55402-3319		

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 June 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,15-18 and 20-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15-18,20 and 21* is/are allowed.

6)☒ Claim(s) *1-13,22 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's amendment was received on 6/6/05, and has been entered and made

of record. Currently, **claims 1-13, 15-18 and 20-23** are pending.

Drawings

2.   The corrected or substitute drawings were received on 6/6/05. The drawings are

acceptable.

Response to Arguments

3.   Applicant's arguments, see pages 10-12, filed 6/6/05, with respect to the

rejections of claims 1-13, 22 and 23 under 35 U.S.C. §103(a) have been fully

considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground of rejection is made in view of Hilton

et al. U.S. Patent No. 6,158,837 (hereinafter Hilton).

4.   Applicant's arguments, see page 10 and 11, filed 6/6/05, with respect to the

rejection of claim 15 under 35 U.S.C. § 112 have been fully considered and are

persuasive. The rejection of claim 15 has been withdrawn.

Allowable Subject Matter

5.   **Claims 15-18, 20 and 21** are allowed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-9, 11-13, 22 and 23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hilton in view of Bradshaw et al. U.S. Patent No. 6,264,295

(hereinafter Bradshaw).

6.   With respect to claim 1, Hilton teaches a method for monitoring at least one print

consumable of a printing device comprising:

a.   receiving a print job, wherein the print job includes an image file and a

copy number representing the number of copies of the image file that are to be

printed (step 109 in fig. 8); and

b.   determining a requested print consumable amount defined as an amount

of print consumable needed to render the print job before rendering of the print

job begins, wherein the print consumable is selected from a group consisting of

ink, toner, colored dye ribbon, and wax based ribbon (col. 10, line 64 – col. 11,

line 3).

Hilton, however, does not teach expressly that the printing device is a compact

disc printing device.

Bradshaw, on the other hand, discloses a CD printing device that receives a rectangular image data and converts it into a polar based image data (col. 5, lines 4-5) for printing on a CD or a label for the CD (col. 5, lines 39-41).

Hilton and Bradshaw are analogous art because they are from the same field of endeavor, which is the printing art.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of detecting the remaining print consumable amount and interrupting the print job based on the remaining amount of Hilton with the method of printing image data on a CD surface of Bradshaw.

The suggestion for doing so would have been to provide a CD printer that monitors the print consumable such as remaining CD labels or CD's to be printed.

Therefore, it would have been obvious to combine Hilton with Bradshaw to obtain the invention as specified in claim 1.

7.   With respect to claim 23, Hilton teaches the method of claim 1 including:

c.   obtaining a remaining print consumable amount defined as an amount of print consumable that is loaded in the printing device (col. 10, lines 47-51);

d.   comparing the requested print consumable amount to the remaining print consumable amount (col. 10, line 64 – col. 11, line 3);

e.   interrupting rendering the print job, prior to rendering the print job, when the requested print consumable amount exceeds the remaining print consumable amount (col. 3, lines 13-17 & col. 11, lines 1-3); and

f.   rendering the print job with the CD printing device when the requested

print consumable amount does not exceed the remaining print consumable

amount (fig. 8).

8.   With respect to claim 2, Hilton teaches the method wherein the interrupting step

(e) includes warning the user that the print job cannot be completed (step 127).

9.   With respect to claim 3, Hilton teaches the method wherein the interrupting step

(e) comprises providing the user with an option of adjusting the copy number of the print

job (step 111).

10.   With respect to claim 5, Hilton teaches the method, wherein the determining step

(b) further comprises determining a single print consumable amount defined as the

amount of print consumable needed to print a single copy of the image file (estimated

ink usage on a average sheet in col. 6, lines 30-34), wherein the requested print

consumable amount is determined by multiplying the single print consumable amount

by the copy number (col. 10, lines 64-67).

11.   With respect to claim 6, Hilton teaches the method of claim 23, wherein:

the determining step (b) further comprises calculating a maximum copy number

representing a maximum number of copies of the image file that can be printed based

upon the remaining print consumable amount and the single print consumable amount

(col. 6, lines 30-39); and

the interrupting step (e) comprises providing the user with at least one option

selected from the group consisting of:

adjusting the copy number of the print job to the maximum copy number; and

adjusting the copy number of the print job to a number that is less than the maximum copy number (col. 11, lines 1-3).

12.   With respect to claim 7, Hilton teaches the method, wherein the interrupting step (e) comprises providing the user with the option of adjusting the amount of print consumable that is available (col. 11, lines 1-3).

13.   With respect to claim 8, Hilton teaches the method, wherein:

the print consumable is stored in a first print cartridge; and

the interrupting step (e) further comprises:

(e) (i) receiving a filename for the first print cartridge (col. 9, lines 50-54);

(e) (ii) saving the remaining print consumable amount of the first print cartridge in a memory under the filename (step 120);

(e) (iii) replacing the first print cartridge with a second print cartridge having a remaining print consumable amount (col. 11, lines 1-3);

(e) (iv) resetting the remaining print consumable amount to the remaining print consumable amount of the second cartridge (col. 9, lines 50-54); and

(e) (v) returning to the comparing step (d) (col. 11, lines 1-3).

14.   With respect to claim 9, Hilton teaches he method of claim 8, wherein the second print cartridge is one of a new print cartridge having a maximum remaining print consumable amount and a used print cartridge having a remaining print consumable amount that is stored in memory under a filename (col. 2, lines 61-63 & col. 11, lines 1-3).

15.   With respect to claim 11, Hilton teaches the method of claim 23, wherein the

interrupting step (e) comprises providing the user with an option of rendering the print

job without any adjustments (steps 90-92).

16.   With respect to claim 12, Hilton teaches the method of claim 23, wherein the

rendering step (f) further comprises updating the remaining print consumable amount by

deducting the requested print consumable amount (col. 8, lines 48-56).

17.   With respect to claim 13, Hilton teaches the method of claim 5, wherein the

rendering step (f) comprises:

        (f) (i) printing a single copy of the image file;

        (f) (ii) deducting the single print consumable amount from the remaining print

consumable amount; and

        (f) (iii) repeating the printing step (f) (i) and the deducting step (f) (ii) until the print

job is completely rendered (col. 8, lines 48-61).

18.   With respect to claim 22, Hilton discloses a system for monitoring print

consumables of a printing device, the system comprising:

        a computer having a processor, an input/output (I/O) port connected to the

printing device, and a memory (fig. 1);

        a software application executable by the processor and configured to prepare a

print job and to communicate with the printing device, through the I/O port, to render the

print job, wherein the print job includes an image file and a copy number representing

the number of copies of the image file that are to be printed (step 109 in fig. 8); and

a print consumables monitoring module configured to:

communicate with the software application and the memory;

maintain a remaining print consumable amount representing the amount of print

consumable currently available to the printing device in the memory (step 122 & col. 3,

lines 13-17);

determine a requested print consumable amount defined as an amount of print

consumable needed to process the print job before rendering of the print job begins,

wherein the print consumable is selected from a group consisting of ink, toner, colored

dye ribbon, and wax based ribbon (col. 10, line 64 – col. 11, line 3); and

compare the remaining print consumable amount to the requested print

consumable amount (col. 10, line 64 – col. 11, line 3);

whereby the rendering of the print job is interrupted when the requested print

consumable amount exceeds the remaining print consumable amount (col. 3, lines 13-

17 & col. 11, lines 1-3).

Hilton, however, does not teach expressly that the printing device is a compact

disc printing device.

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Hilton and Bradshaw are analogous art because they are from the same field of

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At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine the method of detecting the remaining print consumable

amount and interrupting the print job based on the remaining amount of Hilton with the

method of printing image data on a CD surface of Bradshaw.

The suggestion for doing so would have been to provide a CD printer that

monitors the print consumable such as remaining CD labels or CD's to be printed.

Therefore, it would have been obvious to combine Hilton with Bradshaw to obtain

the invention as specified in claim 22.

Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

the combination of Hilton and Bradshaw as applied to claim 23 above, and further in

view of Maruata et al. U.S. Patent No. 6,064,838 (hereinafter Maruata).

19.   With respect to claim 4, Maruata, the same field of endeavor of printing art,

teaches a printer monitoring method, wherein:

the print job further includes a print quality setting relating to an amount of print

consumable used to print an image (col. 16, lines 61-65); and

step of providing the user with the option of adjusting the print quality setting of

the print job, whereby the requested print consumable amount can be reduced (col. 11,

lines 60-64; col. 14, lines 54-61; and col. 16, lines 61-65).

Since Hilton teaches the method for adjusting the current print job, it would have

been obvious to one of ordinary skill in the art to adjust/modify the print quality in

accordance with the options. Hence, it would have been obvious to obtain the invention

as specified in claim 4.

20.   With respect to claim 10, Maruata teaches a printer monitoring method,

comprising providing the user with an option of canceling the rendering of the print job

(col. 9, lines 27-30).

Conclusion

21.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHAN S. PARK whose telephone number is (571) 272-

7409. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward Coles can be reached on (571) 272-7402. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Chan S. Park
Examiner
Art Unit 2622

csp
August 25, 2005

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